CORPORATE IMPACT ON INFECTIOUS DISEASES PROGRAMS*

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A variety of environmental changes have threatened the ability of many teaching hospitals to support their traditional missions of patient care, education, and research.[1,2] These include growing costs of capital to maintain or to replace plant and equipment, increased competition for patients, declining patient census, pressures from third-party payers to control costs, and proposals by government to reduce or to eliminate Medicare support of house staff training. Teaching hospitals are at a competitive disadvantage because of higher costs which result from the expense associated with educational and research activities, the more complex care that they provide, and the disproportionate amount of indigent care provided in many communities. The desire of investor-owned health care corporations to acquire teaching hospitals and the perceived potential for solutions to growing financial problems have led to joint ventures, leasing, or outright sales. Despite grave reservations by some, marriages of convenience have been consummated.[1-4] These pose both potential threats and attractive opportunities for teaching institutions and for their programs and staff in the field of infectious diseases.[5-7]

Review of motivations and potential risks and benefits is difficult because the unions of corporations and teaching hospitals have occurred so recently. There has been no systematic study of impact and there is little published literature. Data presented and opinions expressed herein are derived from precious few publications in the medical literature, bulletins, newsletters, press releases, newspaper clippings, corporate reports, interviews with col-

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leagues, and personal experience. The tentative nature of much of the following discussion is regrettable but unavoidable.

General Characteristics of the Union

Investor-owned corporations are an increasingly formidable force in health care in the United States and abroad.[8-11] The four largest are the Hospital Corporation of America, National Medical Enterprises, American Medical International, and Humana. They own, lease, or manage 744 acute care hospitals with more than 100,000 beds, psychiatric hospitals, rehabilitation centers, substance abuse centers, nursing homes, home health services, and such free-standing facilities as walk-in clinics, imaging centers, and emergency centers.[8] Within the past two years all have begun to market health insurance plans. Most are hybrids offering one or another combination of indemnity insurance and prepaid care through health maintenance organizations and preferred provider organizations. By the middle of 1985 more than 700,000 individuals had subscribed.[8]

The union of corporations and teaching hospitals is a very recent development.[2,7,8] Those consummated before late 1985 are listed in Table I. Others have been or are currently under consideration. Joint ventures or other interactions with teaching institutions are shown in Table II. The acquisition of teaching hospitals has been motivated by desire for a prestigious tertiary care institution to cap a pyramidal or vertically integrated health care delivery network. These institutions have been referred to as "flagship, leadership, or battleship class" hospitals. This primary to tertiary network will then be part of a total health care insurance package. Profit from the teaching hospital seems expected, but at present does not seem to be the major impetus to the acquisitions.

The motivation for union with teaching institutions includes acquisition of capital and other resources to maintain competitveness in the marketplace while preserving, and even strengthening, traditional academic activities and commitment to values, such as concern for the indigent.[2,7] Capital may be needed immediately for replacement or enhancement. The union would also provide access to relatively low cost money and the marketing expertise of the parent corporation. The market share may be enhanced through capital acquisition and marketing initiatives of the corporation. Trust funds may be established from proceeds of the acquisition. The corpus may be preserved in the event that buy-back becomes necessary or desirable. Interest on this capital may support research and education and offset some or all of the costs

TABLE I. UNION OF INVESTOR—OWNED HEALTH CARE CORPORATIONS WITH TEACHING HOSPITALS

*Corporation**	*Institution*	*Affiliation*
American Medical International	St. Joseph Hospital, Omaha**	Creighton University
	Presbyterian-St. Lukes, Denver**	University of Colorado
Hospital Corporation of America	Wesley, Wichita**	University of Kansas
	Presbyterian Hospital, Oklahoma City**	University of Oklahoma
	Lovelace, Albuquerque**	University of New Mexico
Humana	University Hospital, Louisville†	University of Louisville

*See text for abbreviations
**Purchase
†Lease

of indigent care. Other possible benefits relate to physician satisfaction. Results of a recent survey indicate that physicians perceived investor-owned institutions as more "comfortable" places to practice and that the administration was less inclined to attempt to influence decision making.[8] For-profit institutions were also three times more likely to have physician majorities on their boards of directors.[8]

The process of deciding whether to form a union with investor-owned corporations has usually been very open and broadly based within the constituency of the teaching institution. The experiences at George Washington University Medical Center[7] and St. Joseph Hospital-Creighton University[2] have been described in some detail. In both instances advice and counsel was sought from community leaders as well as faculty, staff, administrators, house staff, and students from hospital and university. At St. Joseph the consent of the Archdiocese was also obtained.

In most instances, sections of the contractual agreement with the corporation have been devoted to protection of the teaching hospital's traditional mission. Clauses have been included to protect the existing governing structure, affiliation agreements between the hospital and university, and faculty control of staff appointments. Most assert at least a philosophical commitment to graduate medical education, research, and other educational activities. Several address the subject of indigent care. Most assure a local majority on the boards of directors. A provision for buy-back under certain circumstances appears to be standard.

St. Joseph Hospital As A Prototype

St. Joseph Hospital was the first university-affiliated major teaching hospital to be acquired outright by an investor-owned health care corporation.[2] (Earlier, in 1982, Humana leased the teaching hospital of the University of Louisville.) St. Joseph Hospital has been the primary teaching hospital for Creighton University School of Medicine since 1892. In 1971 St. Joseph Hospital was acquired from the Sisters of St. Francis by the Creighton-Omaha Regional Health Care Corporation, an independent, nonprofit organization. This corporation continued to operate St. Joseph Hospital as a full service Roman Catholic hospital and primary teaching facility for the University. In 1977 an aging physical plant was replaced by a new 431-bed acute care facility on the Creighton campus. In 1983, during a joint university-hospital strategic planning effort, several potential problems were identified. Although St. Joseph Hospital was operating with net revenues in excess of

TABLE II. OTHER INTERACTIONS OF INVESTOR-OWNED HEALTH CARE CORPORATIONS WITH TEACHING HOSPITALS

*Corporation**	*Interaction*	*Affiliation*
American Medical International	Build, own and manage MRI Center	University of California (Irvine)
	Build, own and manage MRI Center	University of Utah
Hospital Corporation of America	Manages university hospital	University of Mississippi
	Manages university hospital	New Jersey Medical School
	Building pediatric-psychiatric hospital	Vanderbilt University
Humana	Build a teaching hospital	Chicago Medical School
National Medical Enterprises	Build and own a medical complex	University of Southern California

*See text for abbreviations

expenses, it was recognized that projected new revenue accumulation would be inadequate to meet the capital requirements for maintenance and improvement five to 10 years hence. The problem was further compounded by heavy indebtedness from construction of the new hospital and costs of nearly 4 million dollars yearly for free care (4% of revenues). While considering possible merger with one or more local or regional hospitals, the board of directors of St. Joseph Hospital was approached by American Medical International. After prolonged discussion within and between groups noted above, the university and hospital board of directors endorsed the sale November 19, 1984. The compelling reasons cited were the desire "to ensure the long-term stability of our teaching hospital and to acquire increased resources for attainment of our goals."[2]

The contract between American Medical International and St. Joseph Hospital was quite specific in its terms. The corporation will continue to operate St. Joseph Hospital as a full-service Catholic teaching hospital. No change was made in the affiliation agreements with Creighton University and the Boys Town National Institute. Income earned by investment of the net proceeds of the sale will be used to pay up to one million dollars annually for indigent care, and American Medical International will pay the balance. The hospital will be governed by a board composed of medical staff members who hold faculty appointments in the university, community representatives, a minority of American Medical International personnel, and representatives from the university and from Boys Town. The board is empowered to make policy, hire and dismiss key administrators, plan and budget, ensure quality, design facilities, determine programs and services, and maintain accreditation. The board may not dissolve the corporation or dispose of all or substantially all of its property and assets.

American Medical International has agreed to spend at least 10 million dollars for new equipment, parking, and land. It will contribute 3 million dollars to a new tax-exempt foundation (Health Future Foundation) to support program development, research, and education. In addition, it will contribute $200,000 annually for a period of 10 years to support a center for study health policy and ethics at Creighton University. Moreover, the income from two million dollars of the net proceeds from the sale will be allocated to this center.

A buy-back clause was included in the contract. If American Medical International reneges on the contract or is acquired by another corporation, or if another organization offers to purchase the hospital, the Creighton

Omaha Regional Health Care Corporation, its designee, or Creighton University has the right to buy back St. Joseph Hospital with a 20% down payment and 80% financing by American Medical International at the prevailing prime interest rate.

The total cost of the acquisition was approximately 100 million dollars. The net proceeds (in excess of 40 million dollars) were deposited in the Health Future Foundation. The new foundation is so managed that the principal will provide funds for repurchase, if necessary. Income from the assets (presently estimated to exceed 60 million dollars) will be used to enhance and support Creighton University's health sciences schools as well as up to one million dollars each year for indigent care. In the year and one half since the acquisition, the Health Future Foundation has enlarged its corpus and awarded or committed in excess of 11 million dollars for new programs, education, and research.

Possible Threats And Pitfalls

Despite the obvious economic advantages of the corporate union, many have expressed grave reservations in the press and the medical literature.[1-7] Many potential threats to the traditional mission and values of both teaching and non-teaching hospitals have been identified.[10,11] To date few, if any, have become reality, but the changing economic climate indicates that constant vigilance may be prudent.

Examples of possible threats include the following: Local managers may respond excessively to the real or perceived interests and demands of a remote corporation rather than to the local board of directors. The avowed commitment to academics may not be sustained in "lean" years economically or as other teaching institutions are purchased. As it attempts to improve occupancy rates, the corporation may recruit physicians unacceptable to the faculty. Traditionally, for-profit corporations have eliminated unprofitable programs and activities, especially in times of intense competition or declining profits, or both. Distance and a decentralized infrastructure may impair decision-making and communication to the corporation superstructure. In the current economic climate, corporate merger or acquisition of the parent by another organization is a possibility. Finally, traditional values, such as concern for the indigent, may be subverted in the quest for profits.

Potential Benefits To The Infectious Disease Community

There are many potential benefits to infectious disease programs and staff. Clearly, with substantial improvement in the overall health and welfare of

the institution, each of its units is likely to prosper. Other more specific benefits may also accrue. As the pyramidal or vertically integrated network is assembled by the parent corporation, new lines of patient referral may be established. Integration of the network will very likely facilitate communication with referring physicians and patients. Prototypic computer-based communication networks have already been established and are in the process of being evaluated. Opportunities for continuing medical education may be enhanced within the network. The infectious disease specialist should be capable of reaching simultaneously nearly every facility within the network. He too may be reached by other educators, regardless of their location within the system. There is great potential for centralization of activities within the infectious disease program in the flagship teaching hospital. The infectious diseases specialist may at least have input into, or at best assume primary responsibility for direction of, aspects of clinical microbiology laboratory activities, infection control, antibiotic utilization, environmental control, or even all quality control.[6] Last, funding for new programs, personnel, or research may improve.

Funding for new ventures may be obtained from the trust established with the net proceeds of the sale or directly from the parent corporation. For example, if the institution lacks a physician specialist in surveillance and control of nosocomial infections, it may be possible to convince the administration that funding such a position may result overall in a significant cost savings. At St. Joseph Hospital the Health Future Foundation has funded over 20 major new programs and projects. In addition, approximately one dozen small grants have been awarded new investigators. A total of more than 11 million dollars has been awarded or committed. These funds appear likely to benefit the joint medical microbiology-infectious diseases program at Creighton University both directly and indirectly. The department has received directly $294,290 for establishment of a postdoctoral fellowship program for physicians and Ph.D.s in antimicrobial agents and chemotherapy. It has also received $17,930 to assist two new investigators. Other programs funded by the foundation promise to enlarge the patient base for referral practice, teaching, and research in infectious diseases. Nearly one million dollars has been allocated to establish a diabetes center and in excess of one million dollars will be devoted to gastrointestinal and oncology centers. Prospects for continuing support of the health science schools from income produced by the foundation's assets appear bright.

Too little time has elapsed to permit careful evaluation of the corporate impact on infectious diseases specialists and their programs beyond the obvious benefit of the infusion of new funds designated for specific purposes.

My colleagues in the field have noticed few changes in their daily practice. Each is aware of potential threats, but remains cautiously optimistic and challenged by potential opportunities. A definitive evaluation will be possible only with the passage of time.

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REFERENCES

1. Relman, A.S.: Who will pay for medical education in our teaching hospitals? *Science 226:*20-23, 1984.
2. O'Brien, R.L. and Haller, M.J.: Investor-owned or nonprofit. Issues and implications for academic and ethical values in a Catholic teaching hospital. *N. Engl. J. Med. 313:*198-201, 1985.
3. Relman, A.S. The new medical-industrial complex. *N. Engl. J. Med. 303:*963-70, 1980.
4. Cunningham, R.M., Jr.: Changing philosophies in medical care and the rise of the investor-owned hospital. *N. Engl. J. Med. 307:*817-19, 1982.
5. Petersdorf, R.B.: Training, cost containment, and practice: Effect on infectious diseases. *Rev. Infect. Dis. 8:*478-87, 1986.
6. Gitch, D.W.: New ways of managing under prospective payment and their impact on the principles and practice of infectious diseases. *Rev. Infect. Dis. 8:*494-98, 1986.
7. Birnbaum, P.S.: The investor-owned hospital in the academic health center: A case study. *GWU Med. Center 7:*1-4, 1984.
8. Kirchner, M.: Will you have to join a hospital chain to survive? *Med. Econ.:*164-76, November 25, 1985.
9. Lefton, D.: Teaching hospitals a target for chains. *Am. Med. News:*8-10, March 8, 1985.
10. Anderson, G.F., Schramm, C.J., Rapoza, C.R., et al.: Investor-owned chains and teaching hospitals. The implications of acquisition. *N. Engl. J. Med. 313:*201-04, 1985.
11. Reading, A.: Involvement of proprietary chains in academic health centers. *N. Engl. J. Med. 313:*194-97, 1985.